COP290: Moodle App

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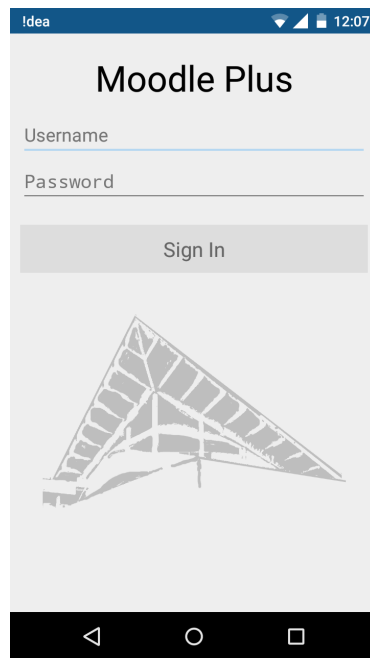Shantanu Kumar (2013EE10798)
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We have designed a user friendly moodle android app. Our app had some added features to enhance the user comfort and ease of usage.

1 User Interface

The UI of the app comprises of six different activities alongwith six fragments. The details of different activities are as follow:

- Login Activity : On clicking the app icon this activity is invoked where user credentials are asked.

- Main Activity : On successful login, this activity is called which had three fragments with different utilities. On the home page, all the registered courses of the user are listed. On the top right corner of the screen there is notifications button and on the left we have side list menu button. The side list menu has options to look at the course list, overall grades, notifications alongwith the option to sign out from the app.

    - Course List Fragment : This fragment displays all the registered courses of the user by populating the list from the data on the server.

    - Notification Fragment : On clicking the notifications button on the top right corner of the screen this fragment is invoked enlisting all the notification pertaining to all the registered courses of the user.

    - Grades Fragment : On clicking the grades option in the side bar list menu this fragment is invoked displaying the overall grades in different courses.
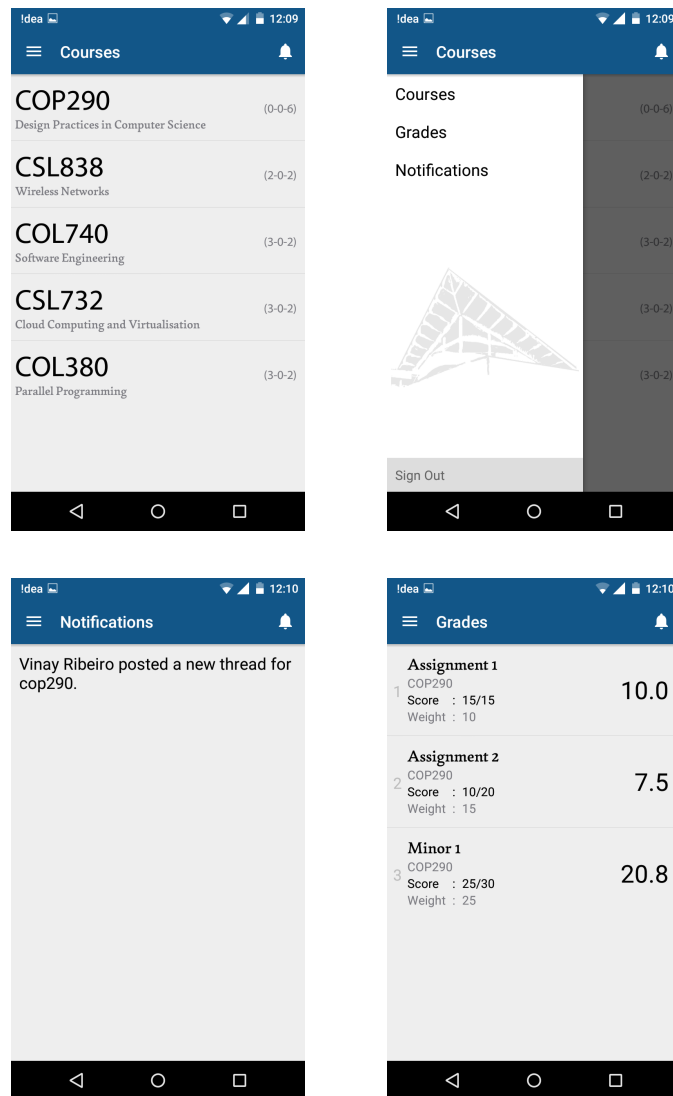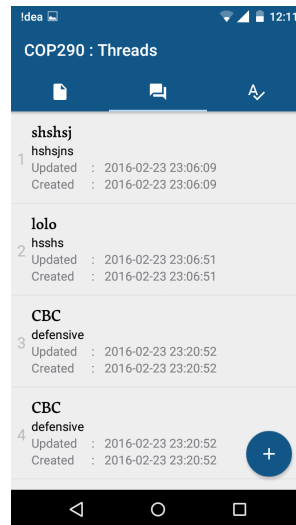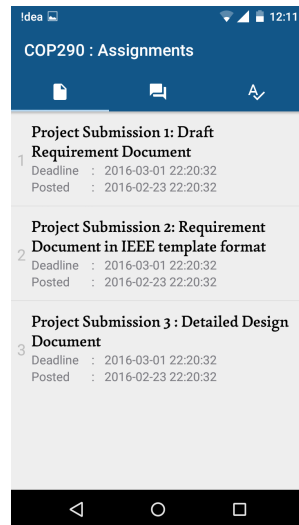
App Icon

Sign In Screen

- Course Activity : On clicking any particular course in the main activity user reaches the course activity showing various details about the selected course. This activity has three fragments corresponding to the course assignments, threads and grades.

  - Assignments Fragment : This lists all the assignments of the particular course with limited information about each one.

  - Threads Fragment : All the threads pertaining to the selected course are enlisted in this fragment.

  - Grades Fragment : List of grades secured in each assignment and exams are displayed in this fragment.

- Assignment Activity : On clicking a particular assignment this activity is called where complete details (date of submission, description, etc.) about that assignment are displayed.

- Thread Activity : This activity has all the content of a particular thread of a particular course and is invoked when the user clicks on the list item

Main Activity Elements
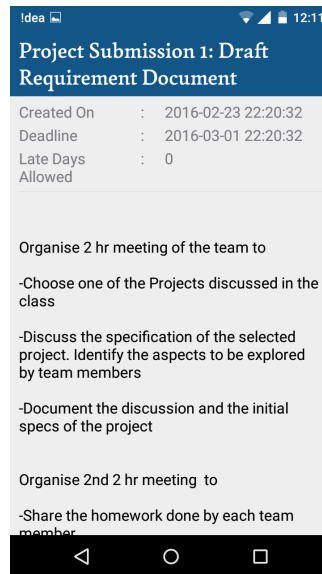
in the course thread fragment.

- New Thread Activity : In the course thread fragment there is button to add new thread. On pressing the button this activity is called where basic details about the thread to be created is asked.
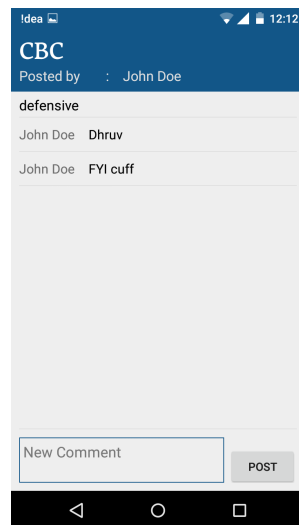
Course Activity Elements
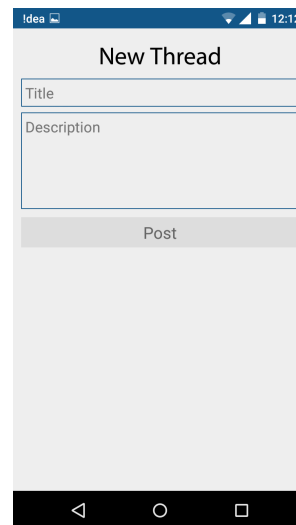
2 Implementation Details

- At the login activity the user credentials are validated by sending the request to the server and checking the response. In case of invalid login, proper message is displayed.

- In order to send the request to server to fetch the particular data a common

Assignment Activity

Thread Activity

New Thread Activity

networking class is built which has functions to returns the json response for the particular request.

- In the main activity all the data regarding the registered courses, notifications and overall grades is loaded into the list-arrays.

- Details about the particular course is loaded when the user clicks on the particular list. Some networking optimizations have been done to avoid the repeated server requests.

- Different classes are built for effective sharing and storage of data through inheritance among various java classes to avoid repetitive code.

- Periodic refresh of the threads has been incorporated so as to update the data on the app whenever there is change in data on the server.

The project is maintained at *https://github.com/SourKream/ProjectWatermelon.git*.

References

[1] Android network tutorial. `http://developer.android.com/training/basics/network-ops/index.html`.

[2] Android screen orientation handling. `http://techblogon.com/android-screen-orientation-change-rotation-example/`.

[3] Stack overflow. `http://stackoverflow.com/`.

[4] Vogella android tutorials. `http://www.vogella.com/tutorials/android.html`.